

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification						Date: February 1999				
APPROPRIATION/BUDGET ACTIVITY: RDT&E,N/4						R-1 ITEM NOMENCLATURE Ship Preliminary Design and Feasibility Studies – 0603564N				

COST (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Total PE Cost	17.721	8.929	12.012	17.000	33.015	37.359	7.859	0	0	164.426
S0408 Ship Feasibility Studies	6.675	2.017	12.012	17.000	33.015	37.359	7.859	0	0	151.468
S2609 ADC(X) Auxiliary Cargo Ship Development	0	5.914	0	0	0	0	0	0	0	5.914
S2610 SSBN To SSGN Analysis	0	.998	0	0	0	0	0	0	0	.998
22300 CV Feasibility Studies	0	0	0	0	0	0	0	0	0	
S2392Cruiser Conversion Studies	11.046	0	0	0	0	0	0	0	0	11.046
Quantity of RDT&E Articles & cost										

A. Mission Description and Budget Item Justification

(U) The primary objective of Ship Preliminary Design and Feasibility Studies is to design more capable warships at reduced cost, with reduced manning and increased producibility, utilizing the latest technologies. Modern day ship design and acquisition processes do not separate Preliminary and Contract Design. These are seamless design actions conducted between MS I and II. Therefore after FY 1996, design activities formerly conducted in this Program Element (P.E.) as Preliminary Design were combined under P.E. 0604567N, Ship Contract Design/Live Fire Test and Evaluation. This program directly supports the Navy Shipbuilding Plan by performing ship Feasibility Studies.

(U) Project S0408 – Ship Development (Advanced), supports post Milestone 0 ship Feasibility Studies that provide the technical definition and initial cost estimates for various ship alternatives being considered in the Analysis of Alternatives (AOA). This project develops the primary supporting documentation for Milestone I decisions.

(U) Project S2392 – This program is funded to support planning yard feasibility studies in support of the CG47 Class Conversion Plan.

(U) Project S2609 – This program provides Auxiliary Dry Cargo (ADC(X)) Feasibility Studies and Analysis of Alternatives (AOA) support.

(U) Project S2610 – This program is funded to analyze the feasibility of converting some Trident SSBNs to the SSGN configuration.

(U) Project 22300 (formerly S2300) – The CV Feasibility Studies project has transitioned to P.E. 0603512N.

R-1 Item No. 49-1 of 49-5

Exhibit R-2 RDT&E Budget Item Justification
(Exhibit R-2, Page 1 of 5)

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification		Date: February 1999
APPROPRIATION/BUDGET ACTIVITY: RDT&E,N/4	R-1 ITEM NOMENCLATURE Ship Preliminary Design and Feasibility Studies – 0603564N	

B. Program Change Summary:

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
FY 1999 President's Budget:	52.084	42.668	25.762
Appropriated Value:	53.682	44.596	
Adjustment to FY 1998/99 Appropriated Value/ FY 1999 President's Budget:	<u>-35.363</u>	<u>-35.667</u>	<u>-13.750</u>
FY 2000 PRESBUDG Submit:	17.721	8.929	12.012

Funding: FY 1998 Changes consist of: -31.124M FY 98/99 Comparability Adjustment -1.223M FY 98 SBIR Reduction; -1.497M FY 1998 BTR Issue, -.369M FY 1998 Updates and -.150M minor pricing adjustments.

FY 1999 Changes consist of : + 1.000M SSGN Study, +5.928M Transfer for ADC(X). Reductions: -35.159M PE Realignment to 0603512N/S2693, -.103M Revised Economic Assumptions, -.026M Civilian Personnel Underexecution, -.354M Contract Advisory & Assistance Services, -.025M FFRDC Reduction, and -5.000M CVX Feasibility Studies reduction.

FY 2000 Changes consist of: +12.000M Realignment for JCC(X), -10.300M LH(X) transfer; -15.428M Other Programmatic Adjustments; and -.022M Additional Inflation Reduction.

Schedule: Not applicable.

Technical: Not applicable.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification			Date: February 1999
APPROPRIATION/BUDGET ACTIVITY RDT&E / BA 4	P.E. Ship Preliminary Design & Feasibility Studies – 0603564N	Ship Feasibility Studies - S0408	

Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Project Cost	6.675	2.017	12.012	17.000	33.015	37.359	7.859	0	0	151.468
RDT&E Articles Qty										

A. (U) Mission Description and Budget Item Justification. Ship concepts, identified in PE 0603563N (Ship Concept Advanced Design) are transitioned to and further developed by this project after an approved Milestone 0 (MS 0) decision. This project performs the Ship Feasibility Studies required after MS 0 to address a specific Mission Needs Statement (MNS) and supports the Analysis of Alternatives(AOA) for new surface ships in the Navy Shipbuilding Plan; performs impact studies of warfare, hull, mechanical and electrical subsystems on advanced ship designs; develops the initial documentation and design methodology required by the government for the design of surface ships in the Shipbuilding Program in accordance with the requirements of the DoD 5000 directives/instructions; supports the development of the Operational Requirements Document (ORD) and other documentation required at Milestone I; develops and evaluates conventional and unconventional hull form alternatives suitable for future acquisition in support of a Milestone I decision. Completion of this phase allows review and approval, at Milestone I, to transfer a ship program to the Contract Design Program Element 0604567N. Ship Feasibility Study products include a description of the alternative ships' principal characteristics and mission critical subsystems, weight estimates, general arrangement sketches, technical risk assessments, and Class F cost estimates. The objective is to provide the decision makers with feasible, affordable alternatives.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1998 ACCOMPLISHMENTS:

- (U) (\$6.675) Continued ADC(X) Ship Feasibility Studies, AOA support and preparation of documentation required for a Milestone I decision. Began CG 47 Class Cruiser Conversion feasibility studies under project S2392.

2. (U) FY 1999 PLAN:

- (U) (\$1.971) Feasibility Studies and AOA support will begin for a new class of helicopter carrier, LH(X) following a Milestone 0 decision
- (U) (\$.046) Portion of extramural program is reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.

3. (U) FY 2000 PLAN:

- (U) (\$12.012) Pre-Milestone I Feasibility Studies for a new Joint Command and Control (JCC(X)) Ship.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification		Date: February 1999
APPROPRIATION/BUDGET ACTIVITY RDT&E / BA 4	P.E. Ship Preliminary Design & Feasibility Studies – 0603564N	Ship Feasibility Studies - S0408

B. (U) Other Program Funding Summary: Not applicable.

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Complete</u>	<u>Total Cost</u>
(U) Related RDT&E:										
(U) PE 0603563N (Ship Concept Advanced Design)										
(U) PE 0604567N (Ship Contract Design/Live Fire T&E)										
(U) PE 0603508N (Ship Propulsion System)										
(U) PE 0602121N (Surface Ship Technology)										
(U) PE 0603573N (Advanced Surface Machinery Systems)										
(U) PE 0603512N (CarrierSystems Development)										

C. (U) Acquisition Strategy: Not applicable.

D. (U) Schedule Profile

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
Program Milestones	1Q DD21 MS I	2Q LH (X) MS 0	4Q JCC(X) MS I
Engineering Milestones	TBD – Milestone schedule is established at MS I.		
T&E Milestones	See individual ship acquisition program documentation.		
Contract Milestones	See individual ship acquisition program documentation.		

R-1 Item No. 49-4 of 49-5

Exhibit R-2a RDT&E Budget Item Justification
(Exhibit R-2, Page 4 of 5)

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3 Cost Analysis		Date: February 1999
APPROPRIATION/BUDGET ACTIVITY: RDT&E,N/BA4	PROGRAM ELEMENT NAME AND NUMBER Ship Preliminary Design and Feasibility Studies – 0603564N	PROJECT NAME AND NUMBER Ship Feasibility Studies – S0408

Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total Pys Cost	FY99 Cost	FY99 Award Date	FY00 Cost	FY00 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR PD	NSWC Dahlgren, VA	8.842	0		0		14.629	23.471	
			3.100	0		0		0	3.100	
		SUPSHIP, Pascagoula	0	0		6.0		0	6.0	
	WR/Reqn Comp	SPAWAR	7.458	.200	Various	1.0		19.172	27.830	
		Other Government	6.939	0	Various	0		23.172	30.111	
	Comp Comp	Applied Physics Lab, MD J.J. McMullen, VA Other Contractor	5.857 9.830	0 1.817	Various Various	0 5.012	Various	10.002 28.258	15.859 44.917	
Subtotal Product Development			42.026	2.017		12.012		95.233	151.29	
Remarks:										
Support: Not applicable.										
Subtotal Support			N/A	N/A		N/A		N/A	N/A	
Remarks:										
T&E: Not applicable										
Subtotal T&E			N/A	N/A		N/A		N/A	N/A	
Remarks:										
Management	Comp	Various	.180	0		0		0	.180	
Subtotal Management			.180	0		0		0	.180	
Remarks:										
Total Cost			42.206	2.017		12.012		95.233	151.468	

R-1 Item No. 49-5 of 49-5

Exhibit R-3 Project Cost Analysis
(Exhibit R-3, Page 5 of 5)

UNCLASSIFIED